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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/695,198
Filing Date: October 28, 2003
Appellant(s): HUBERMAN ET AL.

Nick P. Patel (Reg. No. 57,365)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4/20/09 appealing from the Office action mailed 11/26/08.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

Appellant's arguments filed 4/20/09 with respect to the rejection of claims 11-23 under 35 U.S.C. 112 first paragraph have been fully considered and are persuasive. The rejection of claims 11-23 under 35 U.S.C. 112 first paragraph has been withdrawn.

Appellant's arguments filed 4/20/09 with respect to the rejection of claims 11-23 under 35 U.S.C. 112 second paragraph have been fully considered and are persuasive. The rejection of claims 11-23 under 35 U.S.C. 112 second paragraph has been withdrawn.

Appellant's arguments filed 4/20/09 with respect to the rejection of claim 11 under 35 U.S.C. 112 second paragraph have been fully considered and are persuasive. The rejection of claim 11 under 35 U.S.C. 112 second paragraph has been withdrawn.

Appellant's arguments filed 4/20/09 with respect to the rejection of claims 8, 9, 19 and 28 under 35 U.S.C. 103 (a) have been fully considered and are persuasive. The rejection of claims 8, 9, 19 and 28 under 35 U.S.C. 103 (a) has been withdrawn.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Huberman et al., "Enhancing Privacy and Trust in Electronic Communities" 1999, ACM, pages 78-86

6,618,593	Drutman et al.	09-2003
2005/0086300	Yeager et al.	04-2005
2004/0192383	Zack et al.	09-2004
6,594,762	Doub et al.	07-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-6, 10-18, 20-21, 24 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huberman et al., “Enhancing Privacy and Trust in Electronic communities" (hereinafter Huberman) in view of Drutman et al. (hereinafter Drutman) US 6,618,593.

As per claim 1:

Huberman teaches a method usable on a first communication device adapted to communicate with a second communication device, comprising: obtaining a first key; encoding an attribute in the first communication device with the first key to produce a first encoded value; transmitting the first encoded value to the second communication device; receiving a second encoded value from the second communication device, the second encoded value comprising an attribute stored in the second communication device that has been encoded with a second key associated with the second communication device; encoding the second encoded value with the first key to produce a third encoded value; transmitting the third encoded value to the second communication device; receiving a fourth encoded value from the second communication device, the fourth encoded value comprising the first encoded value after being encoded by the second key; and if the third encoded value matches the fourth encoded value, adjusting a total number of matches; and enabling users of first and second communication devices contact one another only if said total number of

matches meets or exceeds a threshold. (page 80, 3.Community discovery; page 81, Private-Preference Matching; page 85, A. Cryptographic Details and Private Preference Matching)

Huberman does not explicitly disclose physically locating one another based on the result of the preference matching; and wherein the first and second communication devices comprise mobile communication devices. Drutman in analogous art, however, discloses physically locating one another based on the result of the preference matching; (col. 3, lines 60-66; col. 7, lines 15-30; col. 9, lines 5-14; col. 14, lines 28-33) and wherein the first and second communication devices comprise mobile communication devices. (figure 2) Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the method disclosed by Huberman with Drutman in order to provide information related to the location of the mobile communication device to be used to subscribers of matchmaking or dating services. (col. 10, lines 8-15; Drutman)

As per claims 2 and 18:

The combination of Huberman and Drutman teaches all the subject matter as discussed above. In addition, Huberman further discloses a method wherein obtaining a key comprises generating a random number. (Page 85, Cryptographic Details)

As per claim 3:

The combination of Huberman and Drutman teaches all the subject matter as discussed above. In addition, Huberman further discloses a method wherein obtaining a

key comprises reading a preprogrammed value from memory. (Page 85, Cryptographic Details)

As per claims 4 and 12-13:

The combination of Huberman and Drutman teaches all the subject matter as discussed above. In addition, Huberman further discloses a method wherein encoding the attribute with the first key comprises calculating the attribute to the power of the first key to produce the first encoded value. (page 85, Private preference Matching)

As per claims 5 and 14-15:

The combination of Huberman and Drutman teaches all the subject matter as discussed above. In addition, Huberman further discloses a method wherein the second encoded value comprises the attribute of the second device raised to the power of the second key and encoding the second encoded value with the first key comprises raising the second encoded value to the power of the first key. (page 81 and page 85, Private Preference Matching)

As per claim 6 and 16-17:

The combination of Huberman and Drutman teaches all the subject matter as discussed above. In addition, Huberman further discloses a method comprising transmitting the first communication device's attribute to the second communication device only after determining that the third encoded value matches the fourth encoded value. (page 85, Private Preference Matching)

As per claims 7 and 10:

The combination of Huberman and Drutman teaches all the subject matter as discussed above. In addition, Drutman further discloses enabling users of the first and second communication devices to locate one another. (col. 9, lines 5-12)

As per claim 11:

Huberman teaches a communication device, comprising: a processor; memory accessible to said processor and containing an attribute and software executable on said processor; a communication interface coupled to said processor and adapted to permit the communication device to communicate with at least one other external device; wherein, by executing said software, said processor determines whether the attribute in communication device matches an attribute stored in an external device, without receiving the attributes from the external device, based on a first encoded value received via the local communication interface from the external device, said first encoded value being indicative of an attribute stored in the external device; wherein, if the attribute in the communication device matches the attribute stored in the external device, the communication device adjusts a number of matches; wherein, if the number of matches does not meet or exceed a threshold, the communication device refrains from contacting a user of the external device; unless a predetermined attribute of the communication device matches another attribute of the external device. (page 80, 3.Community discovery; page 81, Private-Preference Matching; page 85, A. Cryptographic Details and Private Preference Matching; *see 112 rejection given above*)

Huberman does not explicitly disclose the attribute is a communication's device attribute; physically locating one another based on the result of the preference

matching; and wherein the first and second communication devices comprise mobile communication devices. Drutman in analogous art, however, discloses a profile/ preference data may reflect the particular preferences of the mobile communications device or its user. The profile/preference data contain elements that uniquely identify the particular mobile communications device with which it is associated. (col. 7, lines 15-30) physically locating one another based on the result of the preference matching; (col. 3, lines 60-66; col. 7, lines 15-30; col. 9, lines 5-14; col. 14, lines 28-33) and wherein the first and second communication devices comprise mobile communication devices. (figure 2) Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the method disclosed by Huberman with Drutman in order to provide information related to the location of the mobile communication device to be used to subscribers of matchmaking or dating services. (col. 10, lines 8-15; Drutman)

As per claim 20:

The combination of Huberman and Drutman teaches all the subject matter as discussed above. In addition, Drutman further discloses a method wherein the processor transmits text messages to the external device via the local communication interface. (col. 9, lines 5-12)

As per claim 21:

The combination of Huberman and Drutman teaches all the subject matter as discussed above. In addition, Drutman further discloses a method wherein the

communication interface provides a direct, wireless communication with the external device. (col. 9, lines 5-12)

As per claim 24:

Huberman teaches a system, comprising: a first communication device having a first plurality of attributes and a first key; a second communication device having a second plurality of attributes and a second key, the second communication device is adapted to communicate with the first communication device; wherin the first communication device encrypts each of the first plurality of attributes with a first key to form a first plurality of encrypted values and the second communication device encrypts each of the second plurality of attributes with a second key to form a second plurality of encrypted values; wherein the first communication device transmits each first encrypted value to the second communication device and the second communication device transmits each second encrypted value to the first communication device; wherein the first communication device encrypts each second encrypted values with the first key to produce a third plurality of encrypted values, and the second communication device encrypts each first encrypted value with the second key to produce a forth plurality of encrypted values; wherein the first communication device transmits each third encrypted value to the second communication device, and the second communication device transmits each fourth encrypted value to the first communication device; and wherein, if one of the first or second communication devices determines that any third encoded value matches any fourth encoded value, said one of the first or second communication devices enables a user of the communication device to physically locate

a user of the other communication device; wherein the first communication device is capable of designating a subset of the first plurality of attributes as information that may always, occasionally or never be revealed to the second communication device. (page 80, 3.Community discovery; page 81, Private-Preference Matching; page 85, A. Cryptographic Details and Private Preference Matching)

Huberman does not explicitly disclose physically locating one another based on the result of the preference matching; and wherein the first and second communication devices comprise mobile communication devices. Drutman in analogous art, however, discloses physically locating one another based on the result of the preference matching; (col. 3, lines 60-66; col. 7, lines 15-30; col. 9, lines 5-14; col. 14, lines 28-33) and wherein the first and second communication devices comprise mobile communication devices. (figure 2) Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the method disclosed by Huberman with Drutman in order to provide information related to the location of the mobile communication device to be used to subscribers of matchmaking or dating services. (col. 10, lines 8-15; Drutman)

As per claim 27:

The combination of Huberman and Drutman teaches all the subject matter as discussed above. In addition, Huberman further discloses a system wherein the first key is distinct from the second key. (page 85, Private Preference Matching)

2. Claims 22- 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huberman et al., “Enhancing Privacy and Trust in Electronic communities" (hereinafter Huberman) in view of Drutman et al. (hereinafter Drutman) US 6,618,593 and in view of Yeager et al. (hereinafter Yeager) U.S. Publication Number 2004/0133640

As per claims 22 and 25:

The combination of Huberman and Drutman teaches all the subject matter as discussed above. Both references do not explicitly disclose wherein the communication interface implements Bluetooth. Yeager in analogous art, however, discloses wherein the communication interface implements Bluetooth. (page 22, paragraph 242) Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the method disclosed by Huberman and Drutman with Yeager in order to interact with a peer group with variety of network connections that includes wired and wireless such as IP, Bluetooth, or Havi among others. (page 22, paragraph 242; Yeager)

As per claim 23:

3. The combination of Huberman and Drutman teaches all the subject matter as discussed above. Both references do not explicitly disclose a communication device's attribute comprises an attribute selected from the group comprising contacts, phone numbers, keywords, interests, appointments and favorite restaurants. Yeager in analogous art, however, discloses a communication device's attribute comprises an attribute selected from the group comprising contacts, phone numbers, keywords,

interests, appointments and favorite restaurants. (page 19, paragraph 215) Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the method disclosed by Huberman and Drutman with Yeager in order to interact with a peer group with variety of network connections that includes wired and wireless such as IP, Bluetooth, or Havi among others. (page 22, paragraph 242; Yeager)

4. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huberman et al., “Enhancing Privacy and Trust in Electronic communities" (hereinafter Huberman) in view of Drutman et al. (hereinafter Drutman) US 6,618,593 and further in view of Doub et al. (hereinafter Doub) US 6,594,762.

As per claim 29:

The combination of Huberman and Drutman teaches all the subject matter as discussed above. Both references do not explicitly disclose wherein, if the first communication device is physically separated from the second communication device by a predetermined distance, the first communication device generates a message indicative of said separation. Doub in analogous art, however, teaches wherein, if the first communication device is physically separated from the second communication device by a predetermined distance, the first communication device generates a message indicative of said separation. (col. 3, line 43-61) Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the method disclosed by Huberman and Drutman with Doub in order to determine the two

communications devices are located within the transmit range of each other. (col. 3, lines 47-48; Doub)

Allowable Subject Matter

5. Claims 8, 9, 19 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(10) Response to Argument

Appellant's arguments filed 4/20/09 with respect to the rejection of claims 11-23 under 35 U.S.C. 112 first paragraph have been fully considered and are persuasive. The rejection of claims 11-23 under 35 U.S.C. 112 first paragraph has been withdrawn.

Appellant's arguments filed 4/20/09 with respect to the rejection of claims 11-23 under 35 U.S.C. 112 second paragraph have been fully considered and are persuasive. The rejection of claims 11-23 under 35 U.S.C. 112 second paragraph has been withdrawn.

Appellant's arguments filed 4/20/09 with respect to the rejection of claim 11 under 35 U.S.C. 112 second paragraph have been fully considered and are persuasive. The rejection of claim 11 under 35 U.S.C. 112 second paragraph has been withdrawn.

Appellant's arguments filed 4/20/09 with respect to the rejection of claims 8, 9, 19 and 28 under 35 U.S.C. 103 (a) have been fully considered and are persuasive. The rejection of claims 8, 9, 19 and 28 under 35 U.S.C. 103 (a) has been withdrawn.

The rest of Appellant's arguments have been considered but they are not persuasive.

With respect to claims 1-6, 10-18 and 20-21:

Appellant argued that the combination of Huberman and Drutman fails to teach *"if the third encoded value matches the fourth encoded value, adjusting the number of matches" and "enabling users of the first and second communication device to physically locate one another only if said total number of matches meets or exceeds a threshold."* The Examiner respectfully disagrees. Huberman discloses a community discovery procedure that allows a group of individuals to privately search for others with similar preferences while keeping their preferences private. Anyone can ask a question Q (yes/no question) by posting it on a bulletin board, now anyone can encrypt a message that you can read only if you answered a question in a certain way. These techniques can be repeated for a number of different questions. Then I could send you a message which you could read only if you answered each question a certain way, by encrypting the message so that all of the corresponding keys were necessary to decrypt. Huberman discloses a protocol for Alice and Bob to evaluate the basic preference-matching function. Alice has the list $x_1, \ldots, x_n$ and Bob has the list $y_1, \ldots y_m$.

1. $A \rightarrow B$: $H(x_1)^a, \ldots, H9x_n)^a$ mod p (i.e. first encoded vlaue)

2. $B \rightarrow A$: $H(y_1)^{b,} \ldots, H(y_m)^b$ mod p (i.e. second encoded value)

3. $A \rightarrow B$: $H(y_1)^{ab}, \ldots, H(y_m)^{ab}$ mod p (i.e. third encoded value)

4. $B \rightarrow A$: $H(x_1)ab, \ldots, H(x_n)^{ab}$ mod p (i.e. fourth encoded value)

Each party now can count matches. Alice and Bob got to learn exactly which elements they have in common and not just how many. (*see page 80, 3.Community discovery; page 81, Private-Preference Matching; page 85, A. Cryptographic Details and Private Preference Matching*) Therefore, Huberman discloses if the third encoded vlaue (i.e. $H(y_1)^{ab},....,H(y_m)^{ab}$ **mod p**) matches the fourth encoded value (i.e. $H(x_1)ab,$ $...,H(x_n)^{ab}$ **mod p**), adjusting the total number of matches (i.e. ***each party can now count the matches***).

Further, Huberman discloses how to allow private communication by providing a mechanism for a group of individuals to privately search for others with similar preferences while keeping the preferences private by producing keys that are available to members of the group and allow them to communicate with each other. Compatibility is measured by the number of yes/no questions that were answered in common. A basic preference-matching function takes as input two lists of yes/no answers and a threshold. ***It outputs "true" if the number of answers where the two lists match is at or above the threshold*** (i.e. enabling users of the first and second communication device to communicate with one another only if said total number of matches meets or exceeds a threshold)

Although Huberman teaches a preference matching mechanism that allows members to communicate, Huberman fails to explicitly disclose enabling users to physically locate one another only if said total number of matches meets or exceeds a threshold. Drutman discloses using a preference or profile information associated with the first and second mobile communication device for matching. A profile data may

reflect the particular preferences of the mobile communications device or its user. The user profile information includes characteristics of the user and preferences of the user, and the matching of information of the users includes matching preferences of the second user with characteristics of the first user. ***Further it is desirable to provide systems in which the information defining the location of at least one of the first and the second mobile communication devices includes an address, an intersection, a landmark, a marker, co-ordinates, or a telephone number or in which the location information includes a map, vectors, directions, and an address. The locating information includes audio information, video information, textual information, or graphical information or in which the locating information is updated to track movement of at least one of the first and the second mobile communications devices.*** (col. 3, line 60-col. 4, line 25)

Drutman discloses the first and second communication devices are used by subscribers of a matchmaking or dating service. For example, two teens in a shopping mall area may wish to meet other teens according to specified criteria. In addition to inputting availability status, the teens may also use their cell phones to dynamically indicate a physical proximity within which a match must be located by specifying distance, area or volume preference. ***The matchmaking preference data may include, for example, the gender of the potential match, or the religious, social or economic characteristics of the potential match. If a male teenager wishes to meet a female teenager of the same religious background, then that data is entered by the male teenager on his mobile communication device. Upon finding***

all matches, the receive/transmit status of the potential matching female teenagers are determined. Based upon the set of "available matches" , the central server then monitors the locations of all "available matches" to determine when they are within a default or user specified distance of the requesting male teenager. Upon finding an available, proximate match, the central server then transmits data to the requesting male teenager indicating a matching female teenager has been found. The seeking male teenager may receive the location and/or the personal information for the matching female teenager, including religion if the receive status of the matching female calls for information to be sent. Alternatively, the matching female teenager may also receive the location and/or preference data of the requesting male teenager. (col. 10, lines 5-59)

Appellant argued that "*while the combination of Huberman and Drutman may allow for compatibility testing, it does not appear to allow users to physically locate each other if and only if the necessary condition of passing a threshold has been met. Stated another way, claim 1 requires that it be necessary that a threshold be passed before two users may physically locate each other*." On the contrary Drutman clearly shows users physically locating each other if the necessary condition of passing a threshold is met. Drutman teaches if a male teenager wishes to meet a female teenager of the same religious background…upon finding an available proximate match the seeking male teenager may receive the location and/or personal information of the matching female teenager. In this case a threshold was set ***(female and religious background***) and upon finding all matches (***meeting a threshold***) the seeking male teenager receives

location information ***(physically locate***) which is adequate to meet the claimed limitation "***enabling user of the first and second communications devices to physically locate one another only if total number of matches meets to exceeds a threshold."***

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "users to physically locate each other **if and only if** the necessary condition of passing a threshold has been met") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The Examiner asserts that Huberman teaches allowing members to communicate with each other if the number of answers where the two lists match is at or exceeds a threshold. The only thing Huberman fails to explicitly disclose is enabling users to physically locate one another. However, Drutman in analogous art discloses if a male teenager wishes to meet a female teenager of the same religious background…upon finding an available proximate match the seeking male teenager may receive the location and/or personal information of the matching female teenager. In this case a threshold was set ***(female and religious background***) and upon finding all matches (***meeting a threshold***) the seeking male teenager receives location information ***(physically locate***) which is adequate to meet the claimed limitation "enabling users to physically locate one another only if said total number of matches

meets or exceeds a threshold." This modification would have been obvious to one ordinary skill in the art at the time the invention was made, because one ordinary skill in the art would have been motivated the preference matching system of Huberman in order to provide information related to the location of the mobile communication device to be used to subscribers of matchmaking or dating services, as disclosed by Drutman. (col. 10, lines 8-15; Drutman)

With respect to Claims 24 and 27:

Appellant argued that there is no teaching in Huberman or elsewhere regarding a communication device that "designates a subset of the first plurality of attributes as information that may always, occasionally or never be revealed to the second communication device." The Examiner would like to point out that the claimed language is **expressed in the alternative.** Huberman discloses a procedure that allows for a group of individuals to privately search for others with similar preferences while keeping the preferences private. Further, Drutman discloses that the male teenager may receive the location and/or the personal information of the matching female teenager. Alternatively, the matching female teenager may also receive the location and/or preferences data of the requesting male teenager. Therefore, the combination of Huberman and Drutman teaches designate attributes as information that may always, occasionally or never be revealed to the second device.

With respect to the rejections of claims 22-23 and 25:

The arguments to claim 11 as raised by Appellant have been addressed above with respect to the combination of Huberman and Drutman.

With respect to the rejections of claims 8, 9, 19, and 28:

The claims have been objected for being dependent on a rejected claim (*see Section 9 above*)

With respect to the rejection of claims 29:

Appellant argued that *Doub's reply signal is not "indicative of said separation" as required by claim 29. Doub's reply signal is merely one that acknowledges receipt of the original signal. Because the reply signal is not an indicative of separation between the devices, the Examiner's rejection of claim 29 should be reversed*. Appellant's originally filed specification on paragraph [0031] discloses that "In this case, if, during the matching process, the distance between communication devices A and B increases due to relative movement of the devices A, B beyond the maximum distance permitted by local communication interfaces 102A and 102B, communication devices A and B may display a "failure" message on their display devices 104A and 104B." Consistent with the Appellant's teaching, Doub discloses the display of the electronic device may be enabled when the electronic device and the remote device are located within a first distance and the display device is disabled when the remote device is located a second distance from the remote device, wherein the second distance is greater than the first distance. Therefore, Doub discloses if the first communication device is physically separated from the second device by a predetermined distance (*i.e. a second distance which is greater than the first distance*), the first communication device generates a message indicative of said separation (*i.e. disabling the display device*).

(11) Related Proceeding(s) Appendix

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Shewaye Gelagay/

Examiner, Art Unit 2437

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